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BUREAU OF ENTOMOLOGY
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Forest Entomology.

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BUREAU OF ENTOMOLOGY

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Information on the Habits of the Hickory Barkbeetle
and Methods of Controlling it.

The belief by many observers that the damage done to hickory trees by the hickory barkbeetle is secondary to some other cause, is not borne out by any evidence observed during the writer's studies of this insect and its work during the past twenty years. It is true, as is the case with most Scolytid enemies of living trees, that they will attack weakened, dying and felled trees; in fact, when they do not occur in sufficient numbers to attack and overcome the vital resistance of living, healthy trees, they must depend on such weakened material for their existence. Nevertheless it is a well known fact that when the hickory barkbeetle or any of the other primary barkbeetle enemies of living trees occur in excessive numbers, especially when they come from trees they have killed, they do attack perfectly healthy trees and kill them no matter how favorable the conditions may be for the healthy growth of the trees. The strongest argument against the weakened-vitality theory is the fact that whenever the beetle has been brought under control by artificial means in localities where there has been a great mortality of the trees, the hickories stop dying and remain healthy.

While it may be desirable in exceptional cases of isolated and very valuable trees with considerable neglected infestation in the neighborhood to endeavor to protect such trees from attack by the application of repellents or to try and save them, after they are attacked, by special treatment, we have advised what we believe to be a far better method of protecting the living trees and in the end much more economical, namely, the disposal of a sufficient amount of the infestation within the community so that there will not be enough beetles left to continue their successful attack on the living trees.

It is evident to us that the frequent and continued advice found in various publications for treating individual trees to prevent attack or to kill the beetles and young in the bark has been largely responsible for the failure to recognize the primary requisite of eliminating the beetle as a dangerous pest from the entire neighborhood as recommended in Circular 144 of the Bureau of Entomology and thus render it unnecessary to continue indefinitely the application of expensive treatments to individual trees.

The hickory barkbeetle has evidently been a menace to the hickories of the entire natural range of these trees during an indefinitely long period. From the writer's observation and from reports of correspondents during the past twelve years it is evident that there has been a great loss of hickories from the ravages of this beetle, especially in northern sections from Wisconsin to Connecticut. It is safe to say that millions of trees have died from this cause alone and it is equally safe to say that a very large percentage of these could have been saved, or the menace to living trees eliminated, if the methods we have recommended during this period had been more generally adopted and recommended by State and municipal officials, professional foresters and tree doctors and especially by influential private owners of estates.

The success and economy of the method of disposing of the principal infested trees within a community by cutting and burning them or by converting the valuable portions into commercial products and burning the bark, or utilizing the whole for fuel, was so thoroughly demonstrated in 1903 on Belle Isle Park, Detroit, and recently in Prospect Park Brooklyn, Bronx Park, New York, and on several estates on Long Island and elsewhere that there is no room for doubt that it is the best known method of protecting the hickories from their most destructive enemy.

In order to give instructions on the essential, practical details of control operations in accordance with the method it recommends, the Bureau of Entomology of the U. S. Department of Agriculture is cooperating with a community of estate owners in the vicinity of Cold Spring Harbor and Huntington, Long Island, New York, in conducting an extensive demonstration control project. The instructions given here in the proper location, marking, and disposing of infested trees in connection with this project are available to other State owners and persons interested in the control of this insect on Long Island and adjacent and nearby areas in other States, and it is hoped that such persons will avail themselves of this opportunity to get first-hand information on the essential details of the methods as carried out in actual practice.

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Forest Entomologist.

